



Emulex[®] Drivers for Windows

Quick Installation Guide Release 14.4

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Chapter 1: Introduction

This product supports the following Emulex® adapters:

- LPe38000-series adapters
- LPe37000-series adapters
- LPe36000-series adapters
- LPe35000-series adapters
- LPe32000-series adapters
- LPe31000-series adapters

NOTE: In a server that includes mixed families of Emulex HBAs and that uses a version 14.0 or later driver kit, although LPe12000-series and LPe16000-series HBAs are visible in the Device Manager, the driver is not bound to these HBAs in the server. These HBAs are also not visible in the Emulex HBA Manager application.

Chapter 2: Installation

Emulex drivers for Windows are available in two types of packages:

- The OneInstall driver and application kit contains the Emulex Storport Miniport driver and the Emulex HBA Manager application in a single download package.
- The driver kit, which includes the AutoPilot Installer, provides installation options ranging from simple installations with a few mouse clicks to unattended installations that use predefined script files and text-only installations.

NOTE: Check www.broadcom.com for required updates to the Windows operating system or the Emulex drivers.

2.1 Using the OneInstall Kit

You can run the OneInstall kit in Interactive mode or Silent mode.

NOTE: The OneInstall kit does not allow you to perform preinstallation tasks or text-only installations. For these tasks, use the driver kits.

The OneInstall kit is a self-extracting executable file that installs the following software on your system:

- FC driver
- Emulex HBA Manager application

2.1.1 Loading the OneInstall Kit Using Interactive Mode

To install the drivers and the Emulex HBA Manager application using Interactive mode, perform the following steps:

1. Download the OneInstall kit from the Broadcom® website to a directory on your system.
2. Navigate to the OneInstall kit Installer in Windows Explorer.
3. Double-click the OneInstall file to run it.
The **Welcome** dialog box appears.
4. Click **Next**.
The **Installation Options** dialog box appears.
5. Select the drivers and applications that you want to install and click **Next**.
A progress screen appears while OneInstall loads the selected drivers and applications. After the drivers and application software are loaded, an **Installation completed** dialog box appears.
6. Click **Finish**.

2.1.2 Loading the OneInstall Kit Using Silent Mode

You can perform a Silent mode installation from a batch file or from the command line.

If you run OneInstall from a batch file or from a command line prompt, the default Windows behavior starts OneInstall and then immediately continues with the next command. As a result, the value of `%ERRORLEVEL%` will always be 0 because Windows successfully started OneInstall Installer. It does *not* reflect an accurate OneInstall Installer exit code.

To remedy this problem, run the OneInstall setup as follows:

```
START /wait OneInstall-Setup-<version>.exe  
echo %ERRORLEVEL%
```

The `START /wait` entry ensures that the command prompt does not return until setup has exited. The value of `%ERRORLEVEL%` now accurately reflects the OneInstall exit code.

2.1.2.1 Command Syntax

The following is the installation command syntax:

```
OneInstall-Setup-<version>.exe <install-mode> <options>
```

Where:

`<version>` is the version number of the OneInstall kit.

`<install-mode>` is one of the following:

- `/q0` – (Interactive, nonsilent installation) This is the default.
- `/q1` – (Noninteractive installation) This option displays status pages.
- `/q2` – (Silent installation) This option is completely silent; no pages are displayed.
- `/q` – This is the same as `/q1`.

`<options>` specify the kit, or kits, to install:

`ALL=1` – Installs the FC driver and the Emulex HBA Manager application (default).

NOTE: On a Windows Server Core system, this option installs all drivers and the Emulex HBA Manager application core kit.

`ALLCORE=1` – Installs the FC driver and the Emulex HBA Manager application core kit.

`FC=1` – Installs the FC driver only.

`OCM=1` – Installs the Emulex HBA Manager application.

NOTE: On a Windows Server Core system, this option installs the Emulex HBA Manager application core kit.

`OCMCORE=1` – Installs the Emulex HBA Manager application core kit only.

To install the drivers, applications, or both using Silent mode, perform the following steps:

1. Download the OneInstall kit from the Broadcom website to a directory on your system.
2. Open a DOS window.
3. Navigate to the directory that contains the OneInstall kit.
4. Type the installation command on the command line, and press **Enter**.

The following are examples of Silent mode commands:

```
Start /wait OneInstall-Setup-<version>.exe /q2 ALL=1
Start /wait OneInstall-Setup-<version>.exe /q2 FC=1
Start /wait OneInstall-Setup-<version>.exe /q2 OCM=1
Start /wait OneInstall-Setup-<version>.exe /q2 ALLCORE=1
Start /wait OneInstall-Setup-<version>.exe /q2 OCMCORE=1
```

2.2 Loading the Driver Kit

The driver kit unpacks the selected Emulex drivers and applications onto your computer.

NOTE: This procedure does not install the drivers, and no driver changes are made until you run the AutoPilot Installer application.

To load the driver kit, perform the following steps:

1. Download the driver kit from the Broadcom website to a directory on your system.
2. Navigate to the driver kit in Windows Explorer.
3. Double-click the driver kit file to run it.
The **Emulex Kit Welcome** page appears.
4. Click **Next**.
The **Installation Options** window appears.
5. Select one or both of the following options:
 - **Perform Installation of Software** – Copies the driver kit for your operating system to your computer.
 - **Unpack All Drivers** – Extracts all drivers to the current user's `Documents` folder. Select this option to perform boot from SAN installations.The **Operation in progress** window displays the file-loading progress of the kit. After the kit files are loaded, the **Installation completed** window appears.
6. To continue with the installation, ensure that **Start AutoPilot Installer** is selected.

2.3 AutoPilot Installer

AutoPilot Installer runs after the driver kit loads and the Emulex HBA Manager application is installed. AutoPilot Installer can be installed at the following times:

- Immediately after the driver kit has loaded
- At a later time using an interactive installation
- Through an unattended installation

AutoPilot Installer provides the following functions:

- Command line functionality – Initiates an installation from a command prompt or script. Configuration settings can be specified in the command line.
- Compatibility verification – Verifies that the driver to be installed is compatible with the operating system and platform.
- Driver installation and update – Installs and updates drivers.
- Multiple adapter installation capability – Installs drivers on multiple adapters, due to which you can avoid manually installing the same driver on all adapters in the system..

NOTE: Refer to the *Emulex Software Kit Migration User Guide* for information about installing drivers on a system that contains a mix of OneConnect™ adapters and FC HBAs.

- Driver diagnostics – Determines whether the driver is operating properly.
- Silent installation mode – Suppresses all screen output (necessary for unattended installation).

NOTE: AutoPilot Installer does not allow you to install the driver if the minimum Windows service pack or Microsoft Storport driver update is not installed.

You can install the driver by using any of the following methods:

NOTE: These installation methods are not mutually exclusive.

- **Hardware-first installation.** At least one Emulex adapter must be installed before you can install the Emulex drivers and utilities.
- **Software-first installation.** You can install drivers and utilities using AutoPilot Installer prior to the installation of any adapters. You do not need to specify the adapter models to be installed later. The appropriate drivers and utilities automatically load when you install the adapters.
- **Utility-only installation.** If the drivers in the driver kit share the same version with those already installed on the system, you can reinstall or update the previously installed utility without reinstalling the drivers.
- **Text-only installation.** Text-based installation mode is used automatically when AutoPilot Installer is run on a Windows Server Core system.
- **Network installation.** You can place the driver kit installers on a shared network drive and install them across your LAN. Network-based installation is often used with unattended installation and scripting, which allows you to configure and install the same driver and utility versions on all the hosts in a SAN.
- **Unattended installation.** You can run the driver kit installers and AutoPilot Installer with no user interaction from a command line or script. Unattended installation works for both hardware-first and software-first installations and all driver kits. An unattended installation operates in Silent mode (also referred to as Quiet mode) and creates an extensive report file with installation status.

2.3.1 Starting Installers from a Command Prompt or Script

If a driver kit or AutoPilot Installer is run from a command prompt or command script (batch file), the Windows command processor does not wait for the installer to run to completion. As a result, you cannot check the exit code of the installer before the next command is executed. For command line invocation, always use the `START` command with the `/wait` option, which causes the command processor to wait for the installer to finish before the command processor continues.

For additional information on command line installation and configuration parameters, refer to the *Emulex® Drivers for Windows User Guide*.

2.3.2 Running a Software Installation Interactively

Two options are available to perform an installation interactively. These options assume that you have already downloaded the driver kit from the Broadcom website.

- Option 1 allows you to automatically run AutoPilot Installer, which completes the driver kit loading and installation with a few mouse clicks.
- Option 2 allows you to run AutoPilot Installer separately. Use this option to perform the following actions:
 - Change installation settings for a limited number of systems.
 - Familiarize yourself with AutoPilot Installer configuration options.

2.3.2.1 Option 1: Automatically Run AutoPilot Installer

Use this option unless you have specific configuration requirements.

1. Double-click the driver kit or run it from a command line. The command line parameter `APargs` allows you to specify arguments that are automatically passed to the AutoPilot Installer command.
A **Welcome** window appears with driver kit version information and Emulex contact information (refer to the *Emulex Drivers for Windows User Guide* for additional information on command line installations).
2. Click **Next** to proceed to the **Installation Options** window.
For each installation option, the default installation location for that option is displayed. Browse to a different location, if desired.
3. Click **Install** to continue the installation.
The **Progress** dialog box appears.
After all tasks are completed, a **Finish** window appears. **Start AutoPilot Installer** is automatically selected.
4. Click **Finish**.
AutoPilot Installer runs automatically and completes one of the following installations:
 - Hardware-First Installation or Driver Update (see, [Section 2.3.3, Hardware-First Installation or Driver Update](#))
 - Software-First Installation (see, [Section 2.3.4, Software-First Installation](#))

2.3.2.2 Option 2: Run AutoPilot Installer Separately

Run AutoPilot Installer after the driver kit has finished loading, which allows you to change the configuration options supplied to AutoPilot Installer.

1. Perform [Step 1](#) through [Step 3](#) in [Option 1: Automatically Run AutoPilot Installer](#).
2. Clear **Run AutoPilot Installer** in the **Finish** dialog box.
3. Click **Finish**.
The driver kit installer exits.
After the driver kit loading is complete, change the configuration in one of two ways:
 - Change the configuration file.
 - Supply parameters on the command line.

NOTE: Refer to the *Emulex Drivers for Windows User Guide* for additional information on either of these configuration methods.

After you have finished this step, you can run AutoPilot Installer at a later time.

4. Run AutoPilot Installer using the following command:
`C:\Program Files\Emulex\AutoPilot Installer\APInstall.exe`

NOTE: The location of `APInstall.exe` might differ on your system, depending on your system's Program Files location. You can also specify a different location when you install the driver package.

2.3.3 Hardware-First Installation or Driver Update

You must download the driver kit installer from the Broadcom website and install it before performing this installation.

NOTE: To update an Emulex protocol driver, begin this procedure at [Step 2](#).

To perform a hardware-first installation, perform the following steps:

1. Install a new Emulex adapter and power on the system. If the **Windows Found New Hardware** wizard appears, click **Cancel** to exit; AutoPilot Installer performs this function.

NOTE: If multiple adapters are in the system, the **Windows Found New Hardware** wizard appears multiple times. Click **Cancel** to exit the wizard each time it appears.

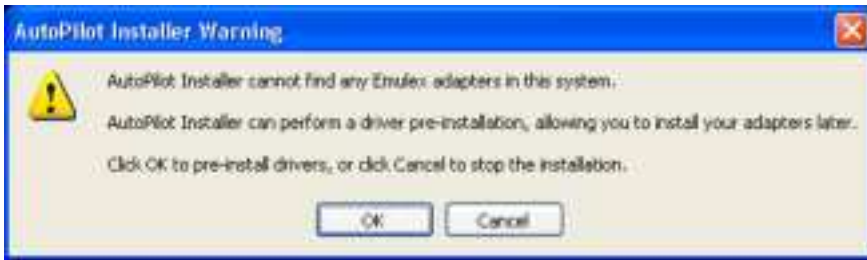
2. Run AutoPilot Installer using one of the two options listed in [Section 2.3.2, Running a Software Installation Interactively](#). Consider the following:
 - If you are updating the driver, the existing port settings are used unless otherwise specified in the configuration file. These settings are preselected, but they can be changed. Set or change the settings, and then click **Next**.
 - If you are initially installing a vendor-specific version of the Emulex driver installation program, a **Driver Configuration** window might be displayed. This window includes one or more windows with questions that you must answer before continuing the installation process. In this case, answer each question and click **Next** on each window to continue.
3. Click **Next**. The installation completes automatically.
A dialog box appears if Windows requires a reboot. After the installation is successful, a **Finish** window appears.
4. View or print a report, if desired.
 - **View Installation Report** – The installation report is a text file with the current Emulex adapter inventory, configuration information, and task results.
 - **Print Installation Report** – The Windows **Print** dialog box is displayed to select options for printing the installation report.
5. Click **Finish** to exit AutoPilot Installer.
6. If the system must be rebooted, you are prompted to do so. You must reboot before using the drivers or utilities.

2.3.4 Software-First Installation

The driver kit must be downloaded from the Broadcom website and loaded.

To do a software-first installation, perform the following steps:

1. Run AutoPilot Installer using one of the two options listed in [Section 2.3.2, Running a Software Installation Interactively](#). The **AutoPilot Installer Warning** dialog box appears.

Figure 1: AutoPilot Installer Popup (Software-First Installation)

2. Click **OK**.
A **Welcome** window appears.
3. Click **Next**. The installation automatically progresses.
After the installation is successful, the **Finish** window appears.
4. View or print a report, if desired.
 - **View Installation Report** – The installation report is a text file with the current Emulex adapter inventory, configuration information, and task results.
 - **Print Installation Report** – The Windows **Print** dialog box is displayed to select options for printing the installation report.
5. Click **Finish** to exit AutoPilot Installer.

2.3.5 Text-Only Driver Installation

Text-based installation mode is used automatically when the driver kit installer runs on a server with the Server Core installation option of Windows Server. During text-based installations, AutoPilot Installer uses a command prompt window. The driver kit installer notifies you when the driver is installed and also gives you an opportunity to stop the installation.

Whether AutoPilot Installer is launched from the command line or run as a program, Windows always starts AutoPilot Installer as a separate stand-alone task. This means that AutoPilot Installer has its own command prompt window and cannot access other windows.

Chapter 3: Installation Failure

The two possible installation failures are described in this chapter.

3.1 AutoPilot Installer Failure

If AutoPilot Installer fails, the **Diagnostics** window displays a message indicating that the adapter failed. If the adapter fails, perform the following steps:

1. Select the adapter to view the reason why the adapter failed. The reason and suggested corrective action are displayed.
2. Perform the suggested corrective action, and run AutoPilot Installer again.

NOTE: You can run `APInstall.exe` from a command prompt.

3.2 OneInstall Failure

OneInstall might fail for any of the following reasons:

- The operating system prerequisites have not been met.
- The individual kit installation failed. To check the installation, run the installation interactively. If you encounter error messages when you run the installation interactively, those issues also apply to an unattended installation.
- If an individual package failed to install properly, run that package's installer directly. This method displays status and error messages that can be used to diagnose the issue. (OneInstall does not provide this information because each package is installed silently.)

